

3. A distance measurement apparatus as recited in claim 2,
wherein the second distance measurement electromagnetic wave is
lower in amplitude than the first distance measurement
5 electromagnetic wave.

4. A distance measurement apparatus as recited in claim 2,
wherein a duration of generation of the second distance
measurement electromagnetic wave is shorter than that of the first
10 distance measurement electromagnetic wave.

5. A distance measurement apparatus as recited in claim 2,
wherein each of the first distance measurement electromagnetic
wave and the second distance measurement electromagnetic wave
15 contains at least one pulse, and a pulse in the second distance
measurement electromagnetic wave is smaller in width than that in
the first distance measurement electromagnetic wave.

6. A distance measurement apparatus as recited in claim 2,
20 wherein each of the first distance measurement electromagnetic
wave and the second distance measurement electromagnetic wave
contains at least one pulse, and the second distance measurement
electromagnetic wave is smaller in pulse number than the first
distance measurement electromagnetic wave.

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7. A distance measurement apparatus as recited in claim 2,

wherein the first distance measurement electromagnetic wave results from modulation in accordance with a pseudo noise code having a first bit length, and the second distance measurement electromagnetic wave results from modulation in accordance with a pseudo noise code having a second bit length smaller than the first bit length.

8. A distance measurement apparatus as recited in claim 2, wherein the obstacle judging means comprises second calculating means for measuring a time interval between a moment of every generation and transmission of the judgement electromagnetic wave by the electromagnetic wave generating means in response to drive by the second driving means to a moment of reception of a corresponding echo wave by the receiving means, and for calculating a distance to an obstacle on the basis of the measured time interval, and judging means for judging whether an obstacle is present in or absent from a prescribed distance range on the basis of the distance calculated by the second calculating means.

9. A distance measurement apparatus comprising:
first means for emitting a first laser beam in a first direction, the first laser beam having a first power;
second means for receiving an echo corresponding to the first laser beam;
third means for determining whether or not the second means receives an echo corresponding to the first laser beam;

fourth means for emitting a second laser beam in the first direction in cases where the third means have determined that the second means receives an echo corresponding to the first laser beam, the second laser beam having a second power;

5 fifth means for emitting a third laser beam in the first direction in cases where the third means have determined that the second means does not receive an echo corresponding to the first laser beam, the third laser beam having a third power, the third power being higher than the first power, the third power being
10 higher than the second power;

sixth means for emitting a fourth laser beam in a second direction after the fourth means emits the second laser beam or the fifth means emits the third laser beam, the second direction being different from the first direction, the fourth laser beam having the
15 first power;

seventh means for receiving an echo corresponding to the fourth laser beam;

eighth means for determining whether or not the seventh means receives an echo corresponding to the fourth laser beam;

20 ninth means for emitting a fifth laser beam in the second direction in cases where the eighth means have determined that the seventh means receives an echo corresponding to the fourth laser beam, the fifth laser beam having the second power; and

tenth means for emitting a sixth laser beam in the second
25 direction in cases where the eighth means have determined that the seventh means does not receive an echo corresponding to the